

CMST-CP OVERVIEW

The U. S. Department of Energy (DOE) Office of Environmental Management (EM) is responsible for cleaning up the legacy of nuclear weapons production at DOE sites. The Characterization, Monitoring, and Sensor Technology Crosscutting Program (CMST-CP) is part of the DOE Office of Science and Technology (OST) whose purpose is to develop new technologies and technological solutions needed to more efficiently clean up DOE sites.

CMST-CP supports DOE EM, OST, and the five OST Focus Areas (each directed at a major environmental problem area) in matters related to characterization, monitoring, and sensor technologies. This support includes:

- Identifying technological solutions and technology gaps in the CMST area.
- Managing research programs and projects in these areas for the Focus Areas.
- Reviewing EM Science Program and EM Applied Research projects and products for potential CMST application to present and anticipated site strategic needs, such as those needed for project completion and site closure.

The ultimate clients for these activities are DOE sites undertaking activities under the DOE EM Offices of Long Term Stewardship, Integration and Disposition, Site Closure, and Project Completion.

DOE sites with radioactive and hazardous wastes or with areas and facilities contaminated with such materials require pre-cleanup characterization followed by monitoring during cleanup and waste treatment, storage, and removal. Long-term, rugged sensors are needed for monitoring waste disposal sites, contaminated sites, and remediated sites to ensure that they remain as expected.

Since its inception a decade ago, the CMST program has been successful in identifying and developing technologies that have reduced the costs of characterization and monitoring to acceptable levels in certain applications, and technologies that have provided previously unavailable solutions in others. The goal of the CMST program is to develop and improve technologies for cost-effective characterization and monitoring activities conducted by the OST Focus Areas and elsewhere in DOE.

The CMST-CP works primarily with and through Focus Areas, which in turn work with Site Technology Coordination Groups (STCGs) at the DOE field offices to identify technology gaps. These gaps occur when site performance specifications or functional requirements for technologies (as represented in STCG need statements) are not met by commercial or readily available prototype technologies. CMST-CP helps bring technology developers and users together to deliver solutions that satisfy user needs. The expertise of the CMST-CP Team, with its many contacts at DOE laboratories, other federal agencies, private companies, and universities, is utilized by all DOE sites and numerous non-DOE sites and environmental groups.

During FY 2000, CMST-CP is funding and managing technology development jointly with the Focus Areas through Technical Task Plans (TTPs) with DOE laboratories, Interagency Agreements (IAGs), Program Research and Development Announcements (PRDAs), Research Opportunity Announcements (ROAs), and the Small Business Innovation Research (SBIR) program.

Historically, CMST-CP grew out of the DOE's site cleanup program that was begun November 1, 1989, and became a semi-autonomous Field-coordinated program in March 1992. Its early success and recognition as a "crosscutting program" grew from participation in Integrated Demonstrations dealing with specific site problems. The first CMST Technology Summary appeared in FY 1993. From the beginning, the CMST program specialized in technology assessments, gap analyses, and information exchange, in addition to funding and managing numerous technology development projects. In FY 1995 the Focus Areas were created, and the CMST program became formally recognized as the Characterization, Monitoring, and Sensor Technology Crosscutting Program (CMST-CP). Under the current Focus Area

Centered Approach begun in FY 2000, primary management and funding responsibility for research, development, demonstration, and deployment activities resides with the Focus Areas; CMST-CP and the other Crosscutting Programs provide support to the Focus Areas.

It is appropriate at this point in the history of CMST not only to describe technologies currently under development, but also to provide a brief retrospective. Accordingly, the following section presents an overview of our history and accomplishments. Appendix A provides selected CMST program highlights and a listing of technology development projects from FY 1990 to the present. Along with the name of each technology project a Tech ID Number (OST Technology Management System [TMS] Tech ID Number) is provided that can be used to access more information about the technology on the EM OST website at the following address: [<http://ost.em.doe.gov/IFD/OSThome.htm>]. If you are not already registered, you can access the TMS as a guest (See the bottom of the TMS sign-in page for instructions.). The following are contacts for current CMST-CP projects.

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Project Facilitators

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